

## What is Claimed:

- 1                   1.     A method of interacting with a display, said method  
2 comprising:  
3                   transmitting a light point towards said display; and  
4                   establishing a mode of operation of said light point based on timing  
5 associated with illumination of said light point.
- 1                   2.     The method of claim 1 further comprising the steps of:  
2                   determining a position of said light point with respect to an image  
3 on said display; and  
4                   updating said image based on at least one of said position and said  
5 mode of operation.
- 1                   3.     The method of claim 1 wherein said mode of operation is  
2 established based on said timing and a position of said light point.
- 1                   4.     The method of claim 1 wherein said timing corresponds to  
2 an interval between successive illuminations of the light point.
- 1                   5.     The method of claim 1 wherein said timing corresponds to a  
2 sequence of operations of the light point.
- 1                   6.     The method of claim 2 further comprising the step of:  
2                   establishing a color range corresponding to a scanned color of said  
3 light point,  
4                   wherein said step of determining includes scanning said light point  
5 and said image on said display, and

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6                   said position of said light point corresponds to a scanned area  
7   having a color within said color range.

1                   7.     The method of claim 2 wherein said image is updated based  
2   on both said position and said mode of operation.

3                   8.     The method of claim 1 further comprising the steps of:  
4                   receiving a voice command; and  
5                   effecting operation of said light point based on said voice  
6   command.

1                   9.     A method of interacting with a display, said method  
2   comprising the steps of:

3                   projecting a first image on said display;

4                   transmitting a light point towards said display;

5                   establishing a mode of operation of said light point based on timing  
6   associated with illumination of said light point;

7                   capturing a combined image of said first image together with said  
8   light point;

9                   processing said combined image to determine a position of said  
10   light point; and

11                  updating said first image based on at least one of said position and  
12   said mode of operation.

1                   10.    The method of claim 9 wherein said mode of operation is  
2   established based on said timing and said position.

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3           11.    The method of claim 9 wherein said first image is updated  
4 based on both said position and said mode of operation.

5           12.    The method of claim 9 further comprising the steps of:

6           receiving a voice command; and

7           effecting operation of said light point based on said voice  
8 command.

1           13.    An apparatus for interacting with a display via a light point,  
2 said apparatus comprising:

3           timing means for determining timing associated with illumination  
4 of said light point; and

5           control means for controlling a mode of operation of said light  
6 point based on said timing.

1           14.    The apparatus of claim 13 additionally comprising:

2           scanning means for determining a position of said light point with  
3 respect to an image on said display; and

4           update means for updating said image based on at least one of said  
5 position and said mode of operation.

1           15.    The apparatus of claim 13 wherein said mode of operation is  
2 controlled based on said timing and a position of said light point.

3           16.    The apparatus of claim 13 wherein said timing means  
4 determines time intervals between successive illuminations of said light point.

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1                   17. The apparatus of claim 13 wherein said timing corresponds  
2 to a sequence of operations of said light point.

1                   18. The apparatus of claim 14 wherein said scanning means  
2 scans a combined image including said light point and said image on said display  
3 and determines said position of said light point by determining an area of said  
4 combined image that has a color corresponding to a color range of a scanned  
5 light point.

1                   19. The apparatus of claim 14 wherein said update means  
2 updates said image based on both said position and said mode of operation.

3                   20. The apparatus of claim 13 further comprising voice  
4 recognition means for receiving a voice command and effecting operation of said  
5 light point based on said voice command.

1                   21. An apparatus for interacting with a display via a light point,  
2 said apparatus comprising:

3                   a projector for projecting a first image on said display;

4                   a light point for transmission toward said display;

5                   timing means for determining timing associated with illumination  
6 of said light point;

7                   control means for controlling a mode of operation of said light  
8 point based on said timing;

9                   a camera for capturing a combined image of said first image  
10 together with said light point;

11                   an image processor for processing said combined image to  
12 determine a position of said light point; and

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13                    update means for updating said first image based on at least one of  
14   said position and said mode of operation.

1                    22.    The apparatus of claim 21 wherein said mode of operation is  
2   controlled based on said timing and said position.

3                    23.    The apparatus of claim 21 wherein said update means  
4   updates said first image based on both said position and said mode of operation.

1                    24.    The apparatus of claim 21 further comprising voice  
2   recognition means for receiving a voice command and effecting operation of said  
3   light point based on said voice command.

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